Manual therapy produces greater relief of neck pain than physiotherapy or general practitioner care

Synopsis

Summary of Hoving J, Koes B, de Vet H, van der Windt D, Assendelft W, van Mameren H, Deville W, Pool J, Scholten R and Bouter L (2002): Manual therapy, physical therapy or continued care by a general practitioner for patients with neck pain. A randomised controlled trial. *Annals of Internal Medicine* 136: 713-722. [Prepared by Chris Maher, Editorial Board Member.]

Question: Which treatment is more effective for neck pain: manual therapy, physical therapy or general practitioner (GP) care? ***Design:*** Randomised controlled trial, with concealed allocation. ***Setting:*** The Netherlands. ***Patients:*** One hundred and eighty-three neck pain patients aged 18-70 years. Inclusion criteria were: neck pain or stiffness for at least 2 weeks, neck symptoms reproduced during physical examination and no manual or physical therapy treatment of neck in previous 6 months. One patient was lost to follow-up at 7 weeks. ***Interventions:*** Sixty patients were allocated to manual therapy, 59 to physical therapy and 64 to general practitioner care. Manual therapy comprised up to six 1hr treatments that could include muscular and specific articular mobilisation techniques plus co-ordination or stabilisation exercises but excluded high velocity thrust techniques. Physiotherapy comprised up to twelve 30min sessions of active exercise. Manual stretching/traction, massage and modalities could precede the exercise. The GP group received standardised care that could include advice, education and medication. ***Outcomes:*** Primary outcomes were: 1) 'successful treatment' defined as patient describing their condition as completely recovered or much improved (patient offered 6 response options ranging from much worse to completely recovered); 2) researcher's rating of physical dysfunction (range 0 = no physical dysfunction, 10 = maximal dysfunction;) 3) bothersomeness of pain, average pain and most severe pain each measured on a 0-10 scale; and 4) disability measured with the Neck Disability Index (range 0 = no disability, 50 = maximum disability). Length of follow-up was 7 weeks, outcomes were measured blind and analysed according to the intention-to-treat principle. ***Result:*** At 7 weeks, a statistically significantly greater proportion of subjects in the manual therapy group (68%) had a successful outcome than in the physiotherapy group (51%) or GP group (36%). The manual therapy group had greater improvements than the GP group for physical function (between-group difference and 95% CI 1.7 units (0.9 to 2.5)) and for all three pain measures, (eg bothersomeness of pain, 1.5 units (0.4 to 3.5)) but not for disability 1.9 points (-0.3 to 4.1). The comparisons of manual therapy versus physical therapy and physical therapy versus GP yielded between-group differences that were typically small and/or not statistically significant. ***Conclusion:*** Neck pain patients receiving manual therapy are more likely to report that their condition has resolved or greatly improved than those receiving physiotherapy (where manual therapy is not permitted) or general practitioner care.

Commentary 1

Two consultations from a GP provide barely enough time to assess the patient and write a prescription. One can wonder then, just how concerted and just how convincing was the "advice on prognosis, advice on psychosocial issues, advice on ergonomics, and encouragement to await further recovery", as conducted in the current study.

A cynical interpretation of the results of this study can be that manual therapy is better than suboptimal care for neck pain by GPs. This, however, is not tantamount to evidence that manual therapy "works". It only works better than mediocre usual care. A more challenging test would have been one in which GPs provided a more concerted intervention over three or six times the number of consultations. Nevertheless, the study reveals that, in reality, manual therapy is better than what GPs currently offer.

However, the improvements in pain, disability, and quality of life were quite modest. The conclusions rely largely on the so-called "success" rates. These figures were defined as a composite of patients "fully recovered" and "much improved", but they were used to imply "complete recovery". The study did not provide a breakdown of fully recovered and much improved. This subjective measure did not impress the authors of the accompanying editorial (Posner and Glew 2002).

Doubtless, proponents of manual therapy will herald this study as evidence positive of their intervention. As a consumer, I lament that the outcomes were reported only at seven weeks, which renders the report essentially meaningless. The thesis is more revealing (Hoving 2001). At 13 weeks the outcomes asymptote, and by 52 weeks significant differences disappear. So, before manual therapists contend that they have a panacea, they should recognise that, at best, they have an intervention that gets a proportion of patients (but far from all) better sooner. At worst, it may be no great call to fame to be better than suboptimal care by GPs constrained to less than a handful of 20 minute consultations.

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References

Hoving JL (2001): Neck Pain in Primary Care. PhD Thesis, Vrie Universitet, Amsterdam.

Posner J and Glew C Editorial (2002): Neck pain. *Annals of Internal Medicine* 136:758-759.

Commentary 2

This study compared a 6-week program of manual therapy, physical therapy and continued GP care for patients with acute/chronic and recurrent neck pain. The results add to evidence of the efficacy of manual therapy, with superior immediate post-treatment effects for manual therapy over physical therapy and continuing GP care. Long-term treatment effects were not provided in this report.

To place these interventions in the Australian context, distinction is made in Holland between physiotherapists with additional training in manual therapy (manual therapists), and those without (physiotherapists). The manual therapy intervention, which was inclusive of low velocity joint mobilisation and specific co-ordination and stabilisation exercises, better reflects standard physiotherapy practice in Australia. Manual therapy is taught as an integral part of usual practice in all Australian undergraduate programs.

This trial demonstrated that general strength and mobility exercises (physiotherapy) and general advice on activity and assurance (GP care) are not as effective as a more specific, multimodal physiotherapy program inclusive of manual therapy. The primary outcome was "treatment success"; the patient reporting complete recovery or much improvement. Treatment success occurred for 68.3% of subjects receiving manual therapy compared with 50.8% of subjects receiving physiotherapy and 35.9% of subjects receiving GP care. For every three patients treated with manual therapy, rather than GP care, one additional patient will have a successful outcome. The GP and physiotherapy patient groups had more days off work than the manual therapy group, and patients under GP care continued with a high medication intake.

The disability and physical dysfunction outcomes displayed smaller between-group differences than were seen with the primary outcome. The authors attributed this to the potential lower sensitivity to change of these measures. Another factor to consider is treatment dosage (six manual therapy interventions in six weeks). Is this sufficient to achieve change, especially in muscle function? Several outcome measures were on a slope of continued improvement at follow-up assessment. Would more treatment produce better outcomes? Optimal dosage of physiotherapy treatment in the context of cost effectiveness is a critical area for future research to ensure that best outcomes are achieved.

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